

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (CURRENTLY AMENDED) A liquid-jet head including a passage-forming substrate on which pressure generating chambers communicating with nozzle orifices ejecting liquid are formed; and piezoelectric elements which are provided on one side of the passage-forming substrate through a vibration plate and cause pressure changes in the pressure generating chambers, wherein a covering plate having a piezoelectric element holding portion which covers the piezoelectric elements is joined with a surface of the passage-forming substrate where the piezoelectric elements are provided, and a nozzle plate provided with the nozzle orifices is joined with a surface of the passage-forming substrate opposite to the surface where the covering plate is joined, and ~~at least~~ a region of the passage-forming substrate facing the piezoelectric element holding portion is ~~relatively~~ thicker than an outside of the region of the passage-forming substrate facing the piezoelectric element holding portion, when said piezoelectric elements are in a non-activated state.

2. (CURRENTLY AMENDED) The liquid-jet head according to claim 1, wherein the region of the passage-forming substrate facing the piezoelectric element holding portion is ~~relatively~~ thicker than the outside of the region facing the piezoelectric element holding portion at least in an aligned direction of the pressure generating chambers.

3. (CURRENTLY AMENDED) The liquid-jet head according to claim 1, wherein the region of the passage-forming substrate facing the piezoelectric element holding portion is relatively thicker than the outside of the region facing the piezoelectric element holding portion at least in a longitudinal direction of the pressure generating chambers.

4. (ORIGINAL) The liquid-jet head according to claim 1, wherein the passage-forming substrate is tapered in thickness from the region facing the piezoelectric element holding portion to an edge of the passage-forming substrate.

5. (ORIGINAL) The liquid-jet head according to claim 1, wherein a difference between a maximum thickness and a minimum thickness of the passage-forming substrate is 30 nm to 5 μm .

6. (ORIGINAL) A liquid-jet apparatus comprising any one of the liquid-jet heads according to claims 1 to 5.

7. (WITHDRAWN) A method of manufacturing a liquid-jet head including a passage-forming substrate on which pressure generating chambers communicating with nozzle orifices ejecting liquid are formed; piezoelectric elements which are provided on one side of the passage-forming substrate through a vibration plate and cause pressure changes in the pressure generating chambers; a covering plate which has a piezoelectric element holding portion covering the piezoelectric elements and is joined with the side of the passage-forming substrate where the

piezoelectric elements are provided; and a nozzle plate which is provided with the nozzle orifices and joined with a surface of the passage-forming substrate opposite the side where the covering plate is joined, the method comprising the steps of :

joining the covering plate with the passage-forming substrate on which the piezoelectric elements are formed;

grinding or polishing a joint surface of the passage-forming substrate with the nozzle plate with a predetermined load to make the passage-forming substrate have a predetermined thickness, and at the same time, forming the joint surface of the passage-forming substrate with the nozzle plate to be curved to make at least a region of the passage-forming substrate facing the piezoelectric element holding portion relatively thicker than an outside of the region facing the piezoelectric element holding portion;

forming the pressure generating chambers on the passage-forming substrate; and

joining the nozzle plate with the passage-forming substrate.

8. (WITHDRAWN) The method of manufacturing the liquid-jet head according to claim 7, wherein, in the step of joining the nozzle plate, a nozzle communicating plate on which nozzle communicating holes communicating with the pressure generating chambers and the nozzle orifices are formed is joined with the surface of the passage-forming substrate, and the nozzle plate is joined with the nozzle communicating plate.